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What is claimed is:

1. A wireless communication system, comprising:
  - a transmitter for transmitting a signal;
  - a plurality of antennas for use by one receiver;
  - 5 a scanner adapted to scan through the plurality of antennas and in turn provide a signal received from each of the plurality of antennas to the receiver and to impart a phase onto a received signal;
  - 10 a receiver having direction finding means for determining the bearing of a received signal in accordance with the phase thereof.
2. A wireless communication system according to claim 1; wherein a scan rate of the scanner for scanning each of the 15 plurality of antennas is at least 100 hertz.
3. A wireless communication system according to claim 1; wherein a scan rate of the scanner for the plurality of antennas is at least 2000 hertz.
4. A wireless communication system according to claim 1; 20 wherein the plurality of antennas are equidistant from a center point.
5. A wireless communication system according to claim 4; wherein the plurality of antennas are spaced equally apart around a circumference of a circle formed about said center 25 point.

6. A wireless communication system according to claim 1; wherein the plurality of antennas comprises at least three antennae.

7. A wireless communication system according to claim 1; 5 wherein the scanner continuously scans and connects each of the plurality of antennae in turn to the receiver for a substantially equal period of time.

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8. A method for communication in a wireless communication environment, comprising:

10 providing a common transceiver with a plurality of antennas;

15 continuously scanning through the said plurality of antennas for a substantially fixed period of time by connecting each of the plurality of antennas in turn to a receiver in the substantially stationary wireless communication environment to impart a phase onto a received signal;

20 determining the bearing of the received signal in accordance with the phase thereof;

25 operating the plurality of antennas as a phased array during a transmit mode.

9. A method for communication in a wireless communication environment according to claim 8; wherein the wireless communication environment comprises a substantially stationary wireless communication environment.

10. A method for communication in a wireless communication environment according to claim 8; wherein the wireless communication environment comprises a wireless local area network.

5 11. A method for communication in a wireless communication environment according to claim 8; wherein the wireless communication environment is a cordless telephone.

12. A method for communication in a wireless communication environment according to claim 8; wherein the  
10 wireless communication environment is a cordless modem.

13. A method for communication in a wireless communication environment according to claim 8; wherein the wireless communication environment is a wireless local loop.

14. A method for communication in a wireless communication environment according to claim 8; wherein the  
15 wireless communication environment is a cellular telephone.

15. A method for communication in a wireless communication environment according to claim 8; wherein the wireless communication environment is a PCS telephone.

20 16. A method for communication in a wireless communication environment according to claim 8; wherein the wireless communication environment is a trunked mobile radio system.

25 17. A method for communication in a wireless communication environment according to claim 8; wherein the

wireless communication environment is a mobile satellite communications system.

18. A method for communication in a wireless communication environment according to claim 8; wherein the  
5 step of continuously scanning connects each of the plurality of antennas to the receiver at least 100 times per second.

19. A method for communication in a wireless communication environment according to claim 8; wherein the step of continuously scanning connects each of the plurality  
10 of antennas to the receiver at least 2000 times per second.

20. A method for communication in a wireless communication environment according to claim 8; further comprising the step of locating each of the plurality of antennas substantially equidistant from a center point.

15 21. A method for communication in a wireless communication environment according to claim 20; wherein the plurality of antennas are spaced equally apart around a circumference of a circle formed about the center point.